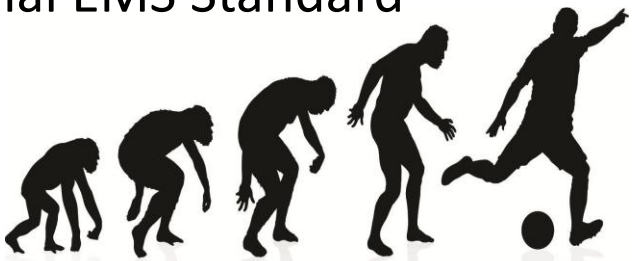
# SS ISO 14001: 2015 – Building Environmentally Sustainable Businesses

**Mr Praveen Tekchandani**
**Member**
**National Working Group on Greenhouse Gas and Product Life Cycle Assessment**

15th Oct 2015

# Evolution of Environmental Management System (EMS)

- Responsible Care Program (Canada) in 1984
- BS 7750 in 1994 - 1st published British National EMS Standard
- Z 750 in 1994 - Canadian EMS Standard
- EMAS in EU in 1994



- ISO 14001 : 1996 - 1st published EMS International Standard
- ISO 14001 : 2004 - 2nd Edition
- ISO 14001 : 2015 - 3rd Edition
- **Most widely used EMS Standards with over 300,000+ certified systems worldwide**.

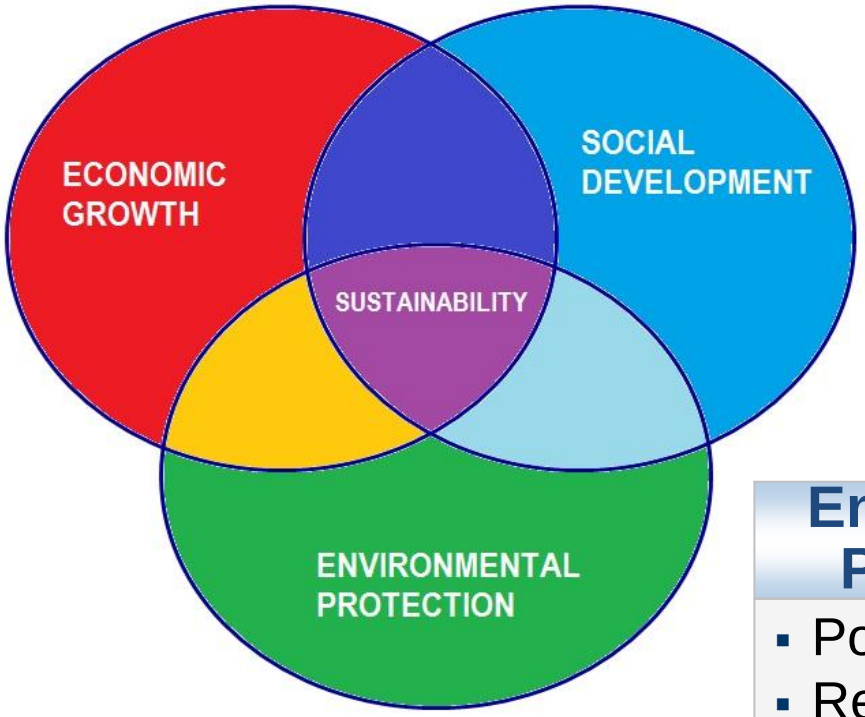

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# Why Adopt Environmental Management System?

## 3 Pillars of Sustainability Development

### Economic Parameters

- Customers
- Employees
- Capital providers
- Suppliers
- Public




### Social Performance

- Labour practices
- Society
- Products
- Human rights

### Environmental Performance

- Pollutants
- Resource use
- Supply chain
- Products & services
- Compliance

**A systematic framework to protect the environment & respond to changing environmental conditions in balance with socio-economic needs.**


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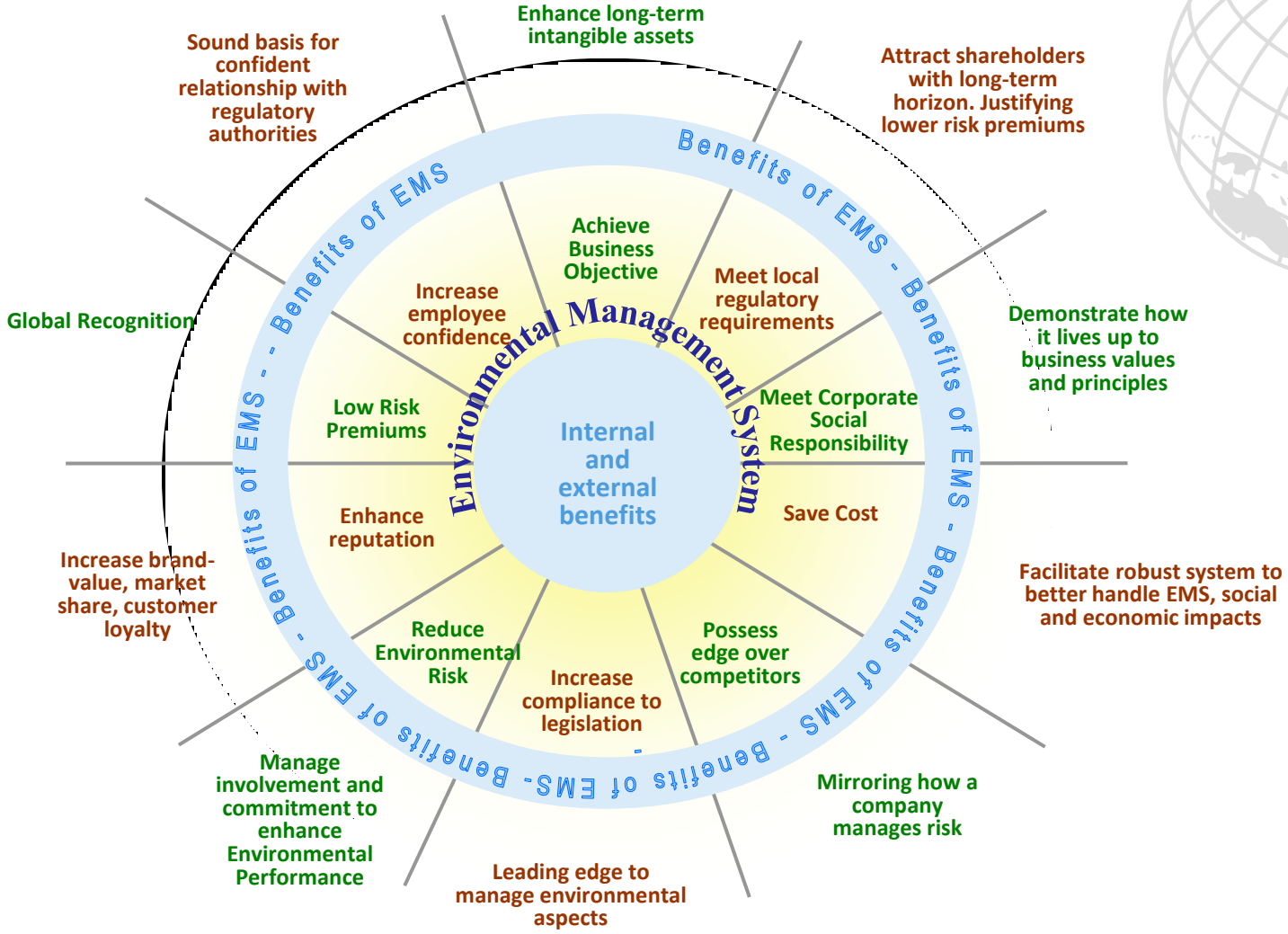
# Key concerns of stakeholders?




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# Benefits of EMS






**Tangible and intangible benefits of Environmental Management System**

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# Scope of Revision

To meet the **environmental challenges** facing organization and provide **value** to both new and existing users.

To conform to **High Level Structure (HLS) of Management System Standards** and its identical text, common terms, and core definitions.





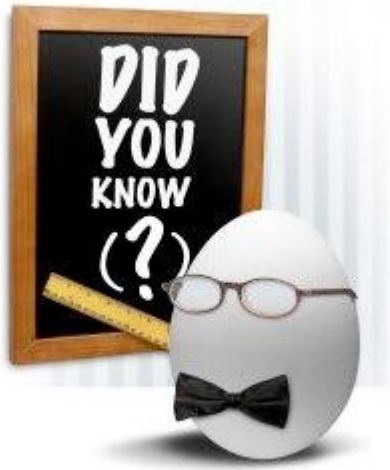
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# Did You Know?

Q1. Montana Glacier National Park in US had 150 glaciers in 1850; How many glaciers are left now?

- ✓ 26 glaciers
- ✓ 73 glaciers
- ✓ 105 glaciers





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# Comparing ISO 14001 and High Level Structure

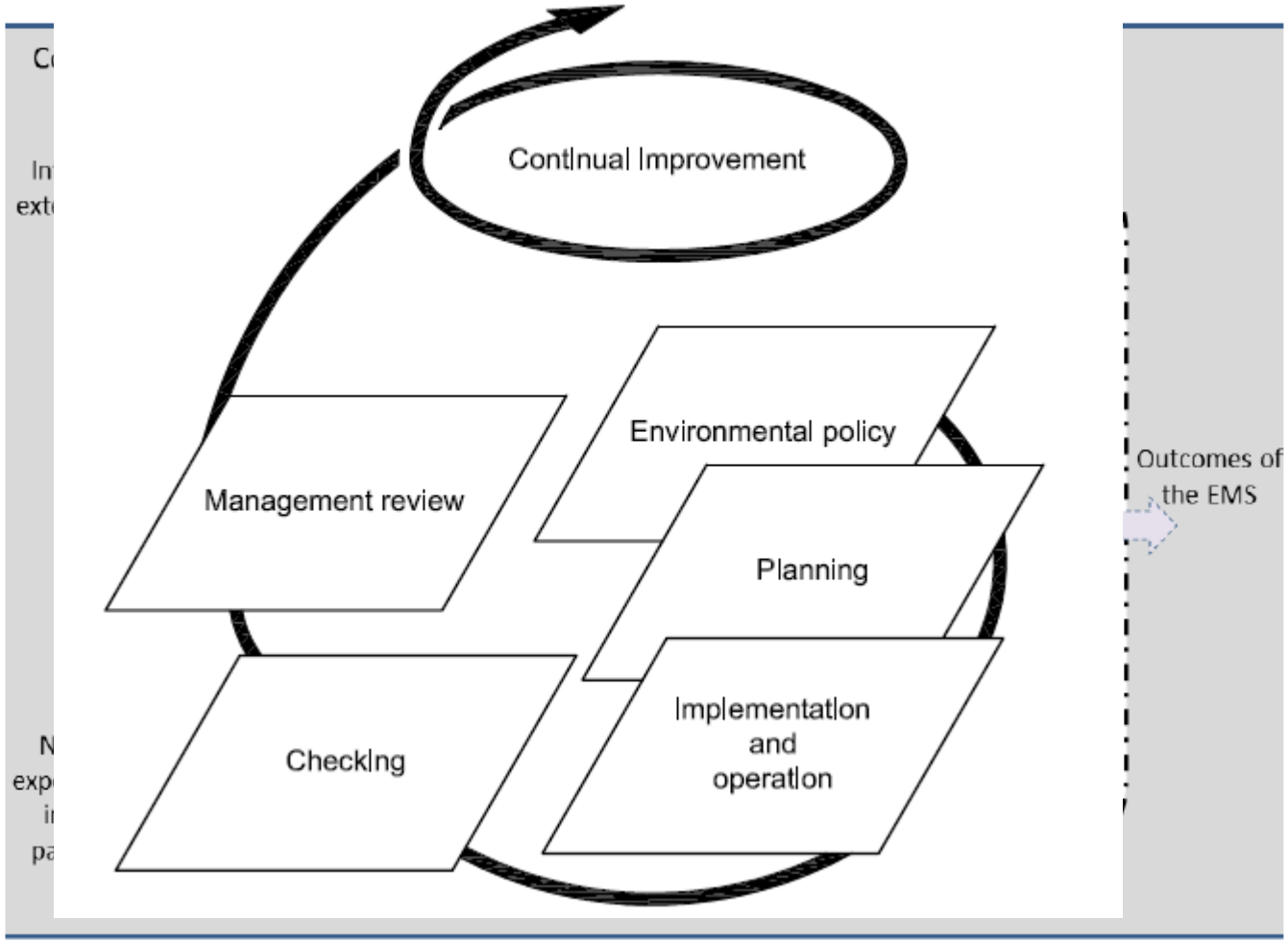
| ISO 14001:2004 Structure | Common High Level Structure |
|---|---|
| 1. Scope | 1. Scope |
| 2. Normative references | 2. Normative references |
| 3. Terms and definitions | 3. Terms and definitions |
| 4. Environmental management system | 4. Context of the organization |
| 4.1 General requirements | 5. Leadership |
| 4.2 Environmental policy | 6. Planning |
| 4.3 Planning | 7. Support |
| 4.4 Implementation & operation | 8. Operation |
| 4.5 Checking | 9. Performance evaluation |
| 4.6 Management review | 10. Improvement |

International Organization for Standardization


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# PDCA Approach

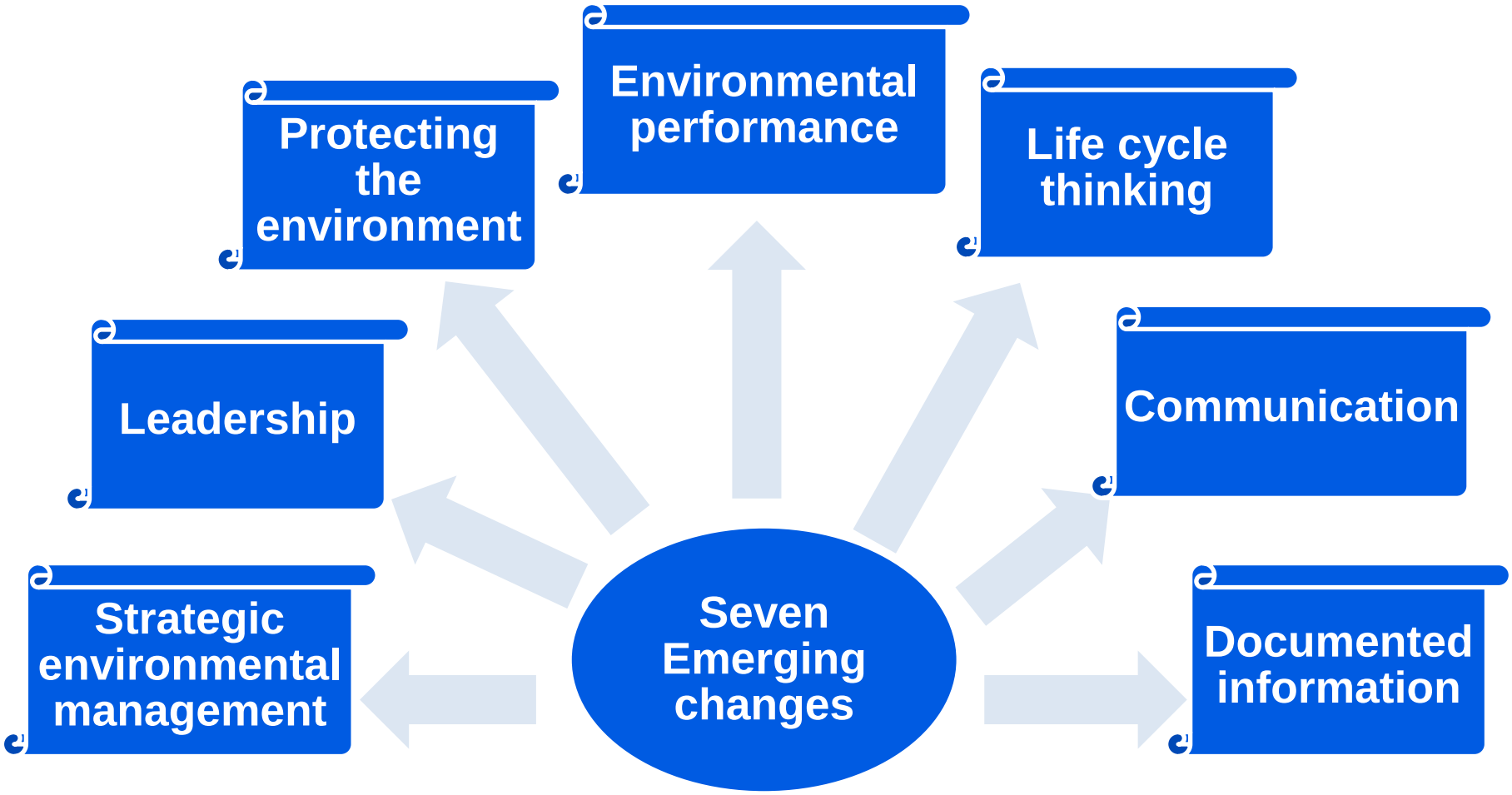
**ISO 14001:2015**





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# What Are the Emerging Changes?





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# Strategic Environmental Management

- Increase in prominence of EMS within the organization's **strategic planning processes**.
- New requirements to understand organization's context, needs & expectations of **interested parties**, and to take action to address **risk associated with threats** and opportunities.
- New requirement for Top Management to ensure **integration** of its EMS requirements into the **organization's business process**.
- New requirement on output of management review to include any implications for the **strategic direction** of the organization.





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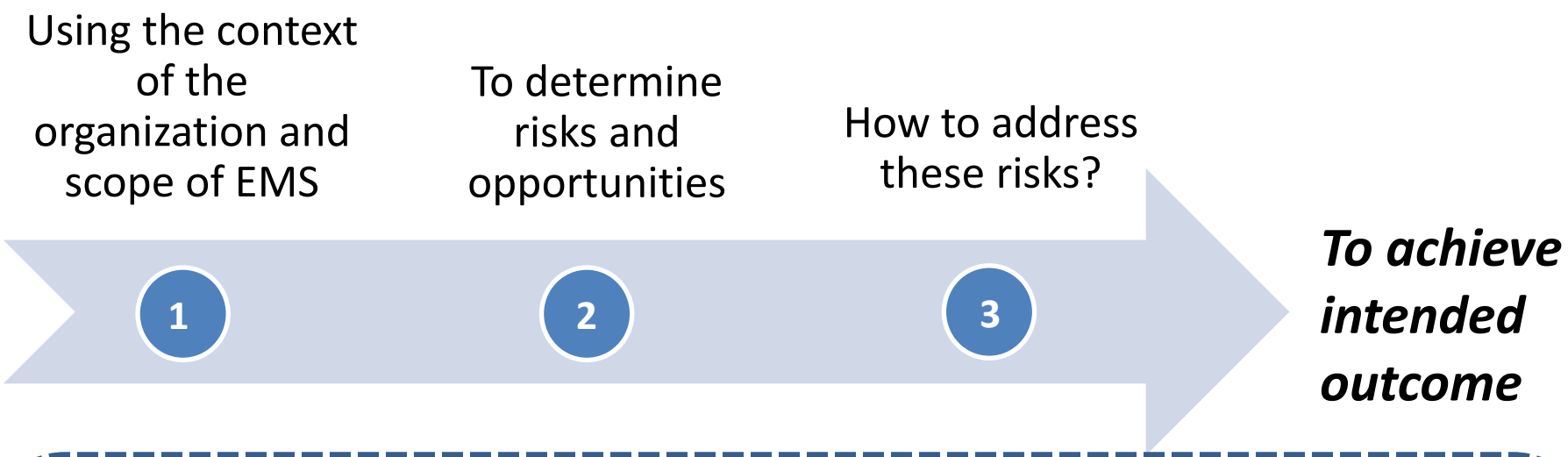
# Needs and Expectation of Interested Parties

| *Determine relevant interested parties* | *Determine their needs and expectations* | *Which of these becomes organization's requirements* |
|---|---|---|
| • Internal and external parties<br>• Examples are investors, employees, NGOs, statutory agencies, etc. | • What are the requirements of the interested parties??<br>• Example: legal regulations, etc. | • Organization to choose that which of these requirements becomes compliance obligation? |

| | Examples of interested parties | Needs and expectations? |
|---|---|---|
| 1 | **Investors** | **Expect the organization to manage its risks and opportunities that can affect an investment** |
| 2 | **Neighbors** | **Expect socially acceptable performance, honesty and integrity** |
| 3 | **Regulatory or statutory agencies** | **Expect demonstration of legal compliance** |


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# Risk Based Thinking




Risks can come from:

- ***Significant environmental aspects***, such as where a pollution incident casts doubt on the organization's ability to manage its significant environmental aspects and thus weakens its credibility,
- ***Non-fulfilment of compliance obligations***, which can result in fines, costs for corrective action, and potentially losing the social license to operate,
- ***Environmental conditions*****,** including events impacting the environment, such as where climate change causes reduced water availability, which can affect the operation of the organization.


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# Leadership

- **New clause** on Leadership and Commitment.
- Top management is **accountable** for the effectiveness of the EMS.
- Top management to **assign responsibility** & authority for ensuring conforming of EMS and reporting on EMS & environmental performance.
- Top management to ensure the integration of EMS into the organization's business processes.




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# Environmental Performance

- Shift in emphasis from organization *continually improve its EMS* to - *Organization to* ***continually improve its EMS to enhance environmental performance.***

- Improvement of environmental performance means reduction of **negative environmental impacts** or enhancement of positive environmental impacts of the organization activities, products or services.

- Outcome of EMS to include enhancement of **environmental performance**.

- New requirement on Environmental Policy to include commitment to continual improvement to **enhance environmental performance**.





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# Protecting the Environment

- Broaden the scope of EMS from prevention of pollution to **protection of environment**.
- New requirement on Environmental Policy to include commitment to the **protection of environment**.
- Commitment to protect the environment is intended to not only prevent adverse environmental impacts, but also to protect the natural environment from harm and degradation.
- Protection of environment includes prevention of pollution, sustainable resource use, climate change mitigation and adaptation, protection of biodiversity and ecosystems etc




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# Life Cycle Thinking

**Consider life cycle perspectives** in identification of environmental aspects & operational control.

Life cycle defines as consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal.




Detailed life cycle **assessment not required**, but a simple consideration of the life cycle stages which can be controlled or influenced by organization is sufficient.

New requirement on Operation Control to take life cycle perspective to determine environmental requirement for **procurement of products** & **services, to establish control of design process** from development, delivery, use, end of life treatment of products & services, and to communicate environmental requirements to external providers, including contractors.


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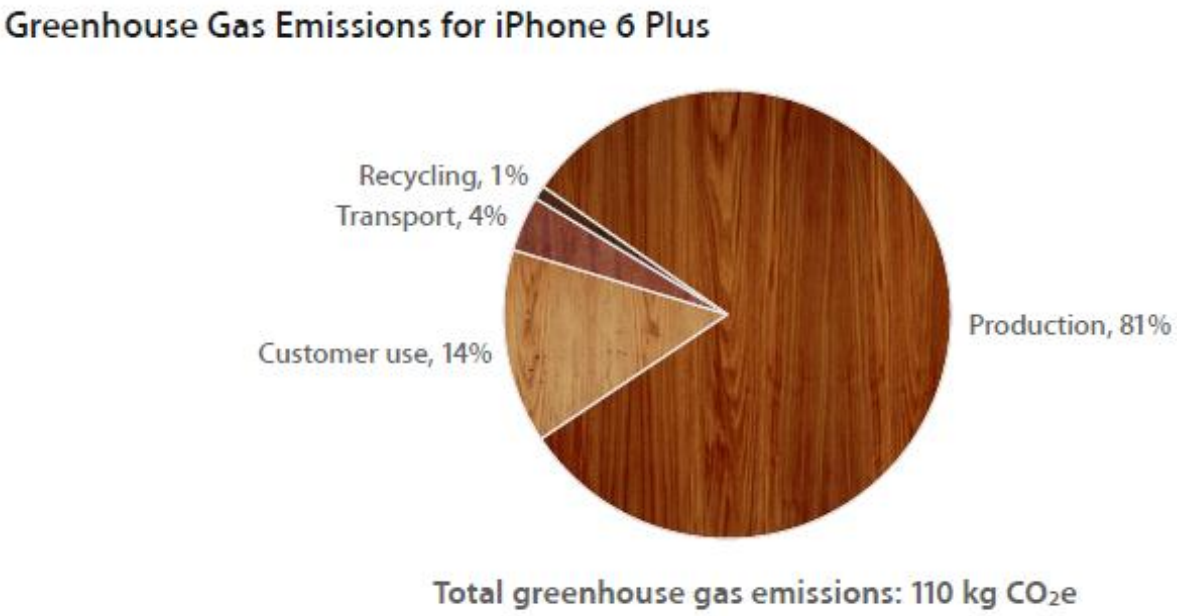
# Did You Know?

Q2. How much is the carbon emission from manufacturing one iPhone?

- ✓ 60kg $CO^2$ per iPhone
- ✓ 75 kg $CO^2$ per iPhone
- ✓ 95 kg $CO^2$ per iPhone
- ✓ 110 kg $CO^2$ per iPhone







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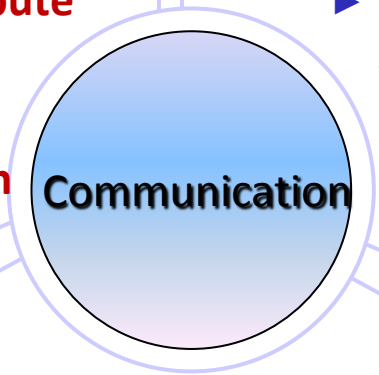
# Communication

## Continual Improvement

- New requirement that communication process enables any person doing work under the organization's control **to contribute to continual improvement.**
- Communication process to include **what, when, with whom and how** to communicate.

## Required Communication

- New requirement on environmental information communicated is **consistent & reliable.**
  - Communication required on significant aspects, roles & responsibilities, environmental policy & objectives, environmental information & performance.




- Incorporate development of communication process with **equal emphasis on external & internal communication.**
- New requirement that organization to externally communicate information as determined by communication process or required by **compliance obligations**.

## External Communication


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# Documented Information

- Incorporate the term "**Documented Information**" instead of " Documents" and "Records" to reflect the evolution of computer and cloud based systems for running management systems.
- Specific requirements for creating, updating controlling and maintaining documents & records not significantly different from 2004 version.
- ***Organizations not required to use term 'documented information'.***




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# Required Documented Information

| Documents | Records |
|---|---|
| Scope of the EMS | Competence |
| Environmental policy | Internal and external communications as appropriate |
| Risks & opportunities | Related operational control records |
| Environmental aspects and impacts | Emergency preparedness and response** |
| Criteria for significant environmental aspects | Monitoring, measurement, analysis and evaluation results |
| Significant environmental aspects | Compliance evaluation results |
| Compliance obligations | Audit programme implementation |
| Environmental objectives | Audit results |
| Operational control** | Management review results |
| Emergency preparedness and response | Corrective actions results, nonconformities, and actions taken |


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# Conversion to ISO 14001:2015

**Sept 2015**
ISO 14001: 2015 Published.

**3 years grace period for conversion**

**Sept 2018**

**Important dates and deadlines: as per IAF:**

**By when**: Conversion to ISO 14001: 2015 must be successfully completed by 14 Sep 2018.


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# Thank You


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